

The Thermal Imaging and Home Energy Reduction (TICHER) Project

A \$1,400 City grant funded a project that brought together residents from the Old City (NOCA) and Rock City (RCNA) neighbourhoods respectively to discuss and demonstrate the idea and personal stories of home energy retrofits (windows, insulation, sealing, heat pumps etc).

Communication of the Project

An e-blast invitation was sent to 150 emails combined with a drop of approximately 200 flyers at the homes of residents living on Machleary and Kennedy Streets in NOCA in early February, 2024. Ten households responded that they were interested in participating. Of the ten, six could attend the evening gathering. In the RCNA email communication was sent out to their 20 members. Ten households expressed interest but only three were able to attend the gathering.

Neighbourhood Gatherings

Two neighbourhood gatherings were held, one in NOCA on February 25, 2024 and the other in the RCNA on April 13, 2024.

Six residents participated at each gathering to hear the stories, and experience the low carbon energy systems (LCES) at the home of a neighbour who had done retrofits. A thermal imaging camera (TIC) was a fun and effective piece of tech we used to show residents where home energy leaks may occur. Everyone hovered around the camera, curious about what the images meant and how they might use it to understand the energy losses in their homes, enabling them to focus on their particular issues. Robust discussions resulted from the “show and tell” sessions as we enjoyed light refreshments.

How Did the Residents Benefit from the Gatherings?

The residents reported from a post gathering survey that they appreciated personally experiencing their neighbour’s story of taking action to reduce their home energy needs, eliminate fossil fuel use, increase the comfort of their home and save money in the long run. They learned valuable lessons about how their neighbour navigated the process to obtain government grants or rebates. Residents learned about tips on the selection of LCES systems. They had myths debunked, such as, all heat pumps are noisy. They were inspired to sign up for an Energy Advisor to visit their home with the TIC, free of charge. Participants were happy to receive a brochure describing the support they could obtain in their energy reduction journey, through a City and RDN funded program called, Home Energy Navigators (HEN). Importantly, they were very happy to have the opportunity to share their stories/questions with each other and they had a good time!

A couple of weeks after the NOCA gathering residents received a 30 minute home visit from an Energy Advisor from the company, EnergyWise. Images from the TIC were electronically sent to the respective home owner so that they could use them in discussions with Home Energy Navigators to develop their plans of action for their energy reductions.

Year-end Wrap Up Survey

In October and November of 2024, the participants were asked what plans had they made and what effect the gatherings and information had on their actions to reduce home energy use and to lower (eliminate) their fossil fuel burning. This is a summary of their responses.

- Inspired to take action from their neighbour’s experiential stories, and greatly appreciated the personal interaction and information from the thermal imaging camera home visits as well as receiving the images.
- Home Energy Navigator program was useful to assist with the basic process but some needed more specific guidance about their particular home in order to take action. It’s complex.
- Over half did small retrofits including increasing insulation or sealing leaks around doors and windows.
- Two of nine households decided to retrofit their current home heating system with a heat pump system, increase insulation and seal areas that needed this treatment. One of these systems was retrofitted from a fossil gas system to a dual system with only fossil gas as a back-up when temperatures dropped severely.
- Two of nine had challenges with creating an action plan because of their unique situation or their stage of life.
- Recommended this project for younger families who own older homes because they would most likely stay in the home and make home energy improvements to realize the full benefits and to increase resale value.
- Called for the expansion and greater reliability of government grants, rebates and programs that help homeowners make wise and economically sound decisions.

Budget

Expenses	Cost (taxes included)
Consumables (paper & printing flyers, prizes)	\$ 0 (City provided) + \$ 115.18 (prizes)
Food at Two Gatherings	\$ 203.70 (Bee’s Knees) + \$ 24.07(Mambo Pizza)
Rent for Meeting Space	\$ 0 (gatherings took place in residents’ homes)
Payment for Thermal Imaging Specialist	\$ 420 (CarbonWise energy advisor home visits; \$150/hour)
Purchase of Thermal Imaging Camera	\$ 338.99
Wrap-up Meeting (coffee/tea, food)	\$ 74.79
Total	\$ 1176.72
Money Remaining	\$ 223.28 (\$ to be used to cover cost of two more home energy visits in RCNA in 2025)

I want to thank the City of Nanaimo for funding the Thermal Imaging Camera and Home Energy Reductions (TICHER) project from the Community Environmental Sustainability Project Grant.

The two photos below illustrate the use of the thermal imaging camera and what was done to remedy the energy leak.

We discovered a problem in a closet where mildew appeared in a back corner. The TIC clearly showed a cold area where the insulation must have come away from the wall. We had hired a company to blow cellulose insulation into the attic, but before they did that, we asked them to secure the vertical insulation batting around the closet.

